COMMUNITY INVOLVEMENT PLAN
(UPDATE)

WEST LAKE LANDFILL SUPERFUND SITE

Bridgeton, Missouri

October 2010

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 7

THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) SUPERFUND COMMUNITY INVOLVEMENT PROGRAM IS COMMITTED TO PROMOTING COMMUNICATION BETWEEN CITIZENS AND THE AGENCY.

ACTIVE PUBLIC INVOLVEMENT IS CRUCIAL TO THE SUCCESS OF ANY PUBLIC PROJECT.

EPA'S COMMUNITY INVOLVEMENT ACTIVITIES AT THE WEST LAKE LANDFILL SUPERFUND SITE ARE DESIGNED TO:

- INFORM THE PUBLIC OF THE NATURE OF THE ENVIRONMENTAL ISSUES ASSOCIATED WITH THE SITE,
- INVOLVE THE PUBLIC IN THE DECISION-MAKING PROCESS THAT WILL AFFECT THEM,
- INVOLVE THE PUBLIC IN THE RESPONSES UNDER CONSIDERATIN TO REMEDY THESE ISSUES, AND
- INFORM THE PUBLIC OF THE PROGRESS BEING MADE TO IMPLEMENT THE REMEDY.

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Section 1.0
Overview of the Community Involvement Plan

EPA developed this Community Involvement Plan Update to facilitate two-way communication between the community surrounding the West Lake Landfill Superfund Site and EPA and to encourage community involvement in site activities. EPA has utilized the community involvement activities outlined in this plan to ensure that residents are continuously informed and provided opportunities to be engaged.

This update serves to provide and present revised information that has transpired since the initial Community Involvement Plan was released, along with foundational and historical information that supports EPA's actions taken at this Site.

The Community Involvement Plan addresses the West Lake Landfill's relationship to the community and EPA (Section 2.0), provides a background of the community (Section 3.0), presents EPA's community involvement program (Section 4.0), and provides a listing of resources available (Appendices). EPA drew upon several information sources to develop this plan, including community interviews and site files. EPA's Regional Office (located in Kansas City, Kansas) will oversee the implementation of the community involvement activities outlined in this Plan.

Section 2.0
Capsule Site Description

2.1 Site Background and History

The West Lake Landfill Superfund Site is located on a 200-acre parcel about 1 mile north of the I-70 interchange within the city limits of Bridgeton, Missouri in northwestern St. Louis County. The Missouri River lies about two miles to the north and west of the Site. The Site is bounded on the north by St. Charles Rock Road and on the east by Taussig Road and undeveloped land. Old St. Charles Rock Road borders the southern and western portions of the Site. The Earth City Industrial Park is adjacent to the Site on the west. The Spanish Village residential subdivision is located less than one mile to the south.

The Site consists of the Bridgeton Municipal Landfill and several inactive areas with sanitary and demolition fill. The Bridgeton Landfill ceased disposal operations in 2005. Other facilities, which are not subject to this response action are located on the 200-acre parcel, including concrete and asphalt batch plants, a solid waste transfer station, and an automobile repair shop. The Site was used agriculturally until 1939 when the limestone quarrying and crushing operation began. Beginning in the early 1950s, portions of the quarried areas and adjacent areas were used for landfilling municipal refuse, industrial solid wastes and construction/demolition debris. These early operations were not subject to State permitting. Two areas of the Site were radiologically contaminated in 1973 when soils mixed with leached barium sulfate residues were used as daily and

intermediate cover in the landfill operations. The barium sulfate residues were some of the uranium ore processing residues and were initially stored at the St. Louis Airport Site (SLAPS). The quarry pits were used for permitted solid waste landfill operations beginning in 1979.

2.2 Site Description

The Site is divided into two operable units (OUs), each with identifying areas. OU-1 consists of the radiological areas (Areas 1 and 2) and OU-2 consists of the other landfilled areas which did not receive any of the radiologically-contaminated soil:

• Radiological Area 1 – This area was part of the landfill operations conducted prior to State regulation. The Missouri Department of Natural Resources (MDNR) was formed in 1974. Approximately 10 acres are impacted by radionuclides at depths ranging up to 15 feet. The radionuclides are in soil material that is intermixed with the overall landfill matrix consisting of municipal refuse. The total volume of radiologically-impacted materials is estimated at 24,400 cubic yards.

• Radiological Area 2 – This area was also part of the unregulated landfill operations conducted prior to 1974. Approximately 30 acres are impacted by radionuclides at depths generally ranging to 12 feet, with some localized occurrences that are deeper. The radionuclides are in soil material that is intermixed with the overall landfill matrix consisting mostly of construction and demolition debris. The total volume of radiologically-impacted materials is estimated at 118,000 cubic yards.

• Buffer Zone/Crossroad Property – This property, also known as the Ford Property, lies west of Radiological Area 2 and became surficially-contaminated when erosion of soil from the landfill berm resulted in the transport of radiologically-contaminated soils from Area 2 onto the adjacent property.

• Closed Demolition Landfill – This area is located on the southeast side of Radiological Area 2. This landfill received demolition debris. It received none of the radiologically-contaminated soil. It operated under a permit with the State and was closed in 1995.

• Inactive Sanitary Landfill – This landfill is located south of Radiological Area 2 and was part of the unregulated landfill operations conducted prior to 1974. The landfill contains sanitary wastes and a variety of other solid wastes and demolition debris. It received none of the radiologically-contaminated soil.

• Former Active Sanitary Landfill – This municipal solid waste landfill, known as the Bridgeton Landfill, is located on the south and east portions of the Site. The landfill is subject to a State permit, which was issued in 1974. This landfill received none of the radiologically-contaminated soil. Landfill operations ceased in 2005 and closure and post-closure activities are currently in progress.

(See map of landfill areas and adjacent land uses on next page)

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Figure 3

Site and Surrounding Land Uses

West Lake Landfill OU-1 Supplemental Feasibility Study

EMSI Engineering Management Support, Inc.

2.3 Site Inspections and Cleanup Activities

Field studies show that the radionuclides present in Radiological Areas 1 and 2 are members of the naturally-occurring uranium-238 (U-238) and uranium-235 (U-235) series. The radionuclides derive from ore processing residues with an elevated ratio of thorium-230 (Th-230). The high relative concentration of thorium resulted from ore processing designed to separate out uranium and radium, thus "depleting" the ores of uranium and radium, or "enriching" the residues in thorium. Over time, the radionuclides will return to their natural proportions (establish secular equilibrium).

The results of chemical sampling and analysis of the waste materials and the groundwater in the unregulated portions of the landfill (Radiological Areas 1 and 2 and Inactive Sanitary Landfill) are consistent with the disposal of sanitary wastes or municipal refuse and show no evidence of significant industrial hazardous waste disposal.

Based on groundwater monitoring data, several radionuclides and chemical contaminants are present in the shallow groundwater beneath the site, including uranium, petroleum hydrocarbons, and several volatile organic compounds (VOCs). The contaminants generally occur at low concentrations and detections are sporadic. The data do not indicate the presence of contaminant plumes or contiguous areas of groundwater contamination associated with the landfill areas. Groundwater transport of contaminants to off-site areas does not appear to be a significant migration pathway under current conditions. Data summaries and detailed evaluations are in the Remedial Investigation reports for OU-1 and OU-2, which are included in the Administrative Record file.

The following site characterization activities have been performed by the U.S. Nuclear Regulatory Commission: overland gamma surveys; 61 surface soil samples collected; extensive boring program (including 75 holes & 19 detailed gamma logs); a thorough groundwater sampling investigation; an extensive air investigation (including gaseous and particulate); and vegetation sampling.

Reports and studies (with reference information) on the characterization process are listed below:

- Overland Gamma Survey Report (McLaren/Hart – 1996)
- Site Reconnaissance Report (McLaren/Hart – 1996)
- Radon Gas, Landfill Gas and Fugitive Dust Report (McLaren/Hart – 1996)
- Rainwater Runoff, Erosional Sediment, Surface Water, and Leachate Sampling Data Report (McLaren/Hart – 1996)
- Soil and Groundwater Sampling Data Summary Report (McLaren/Hart – 1996)
- Groundwater Conditions Report (McLaren/Hart – 1996)

- Soil Boring/Surface Soil Investigation Report (McLaren/Hart – 1996)

- Site Characterization Summary Report (EMSI – 1997)

- Hydrogeological Characterization Report (Golder Associates – 1997)

- Environmental Investigation and Health Impacts Assessment, Bridgeton Landfill (Golder Associates – 1993)

- Radiological Survey (Golder Associates – 1996)

EPA has served as the lead agency for the Site. After listing the site on the National Priorities List in 1990, EPA completed a preliminary study and determined that no immediate threats were present and therefore, no immediate actions were necessary at the Site, while studies and investigations were underway. Subsequently, EPA entered into a consent agreement with the responsible parties, in which the parties agreed to conduct the field studies and engineering evaluations designed to identify the best strategies for cleanup. Remedial investigation and feasibility study work was completed in 2006 and a proposed plan for both OUs was published in June 2006. The selected remedy called for the installation of an engineered landfill cover and the implementation of a long-term monitoring program. The Record of Decision (ROD) for OU-1 (radiological areas) was signed in May 2008. The ROD for OU-2 (all other landfill areas that do not contain radiological waste) was signed in July 2008. Under this action, these landfill units will be closed and monitored in accordance with the State of Missouri solid waste regulations.

(Please see Section 3.2 – History of Community Involvement – for information on public engagement, interaction, and meetings conducted in support of this Site)

Section 3.0
Community Background

3.1 Community Profile

Bridgeton is one of the oldest communities in the state of Missouri. The original 15 blocks were platted in 1794, shortly after our nation was founded. They also hold the oldest continuous state charter, which was granted in 1843.

The city's modern history began much later. In 1950, Bridgeton has a population of 276, less than it's population in 1794. In 1950, under its governing body, a Board of Trustees, Bridgeton exercised a special provision in the state's Legislative Charter and unilaterally extended Bridgeton's boundaries through annexations. A series of annexations through the 1950s expanded the city's boundaries from 196 acres to an estimated 17 square miles. In 1966, the City of Bridgeton last revised its Charter and established the current form and operation of Municipal government. During the 2000 Census, the area of Bridgeton was estimated to be 15.2 square miles, with a population of 15,550.

Bridgeton was one of the first communities in St. Louis County to hire a professional planner and develop a comprehensive plan for the city. In 1992, Bridgeton started a complete review of its Comprehensive Plan utilizing broad-based citizen involvement through workshops, committees, and a community opinion questionnaire.

Through the years, Bridgeton's population and economy blossomed. As new subdivisions were developed and new businesses opened and thrived, Municipal services continued to be added, improved upon, and expanded. Parks and community programs were developed to serve all of the City's residents and visitors.

The City of Bridgeton is located in St. Louis County and has a population of 15,050. The elevation is 580 feet, it has a land area of 14.6 square miles, and a population density of 1,033 people per square mile. Demographics are depicted below:

Males.....7,274 (48.3%)
Females.....7,776 (51.7%)
Median Resident Age.....40.2
Missouri Median Age.....36.1

Estimated Median Household Income (2008).....$56,124 (Bridgeton)
State of Missouri.....$46,867

Population 25 years and > (Bridgeton)
High school or >.....86.8%
Bachelor's degree or >.....26.2%
Graduate or Professional degree..... 7.1%
Unemployed..... 4.8%
Mean travel time to work.....21.5 minutes

Population 15 years and > (Bridgeton)
Never married.....24.7%
Now married.....54.7%
Separated.....1.7%
Widowed.....7.6%
Divorced.....11.4%

565 residents are from other continents..... (1.4% Asia, 1.2% Europe, 1% Latin America)
Bridgeton.....3.6%
State of Missouri.....2.7%

Ancestries include: German (31.1%, Irish (19.0%), English (9.8%), Italian (6.1%), United States (5.4%), French (4.9%).

Public Schools in Bridgeton:

Bridgeway Elementary School
11635 Oakbury Ct.
Bridgeton, Missouri 63044
(Pre-Kindergarten – Grade 5)

Carrollton Elementary School
3936 Celburne Lane
Bridgeton, Missouri 63044
(Kindergarten – Grade 5)

Carrollton Oaks Elementary School
4385 Holmford Drive
Bridgeton, Missouri 63044
(Kindergarten – Grade 5)

Private Schools in Bridgeton:

Kingdom Children, Inc.
3533 North Lindberg Blvd.
Bridgeton, Missouri 63044
(Pre-Kindergarten – Kindergarten)

St. Lawrence The Martyr School
4329 Dupage Drive
Bridgeton, Missouri 63044
(Pre-Kindergarten – Grade 8)

Trinity Luthern School
3765 McKelvey
Bridgeton, Missouri 63044
(Grade 2 – 8)

The City of Bridgeton is served by the Pattonville School District which houses a number of middle and high schools, providing accessibility to the Bridgeton community.

3.2 History of Community Involvement

The West Lake Landfill was placed on the National Priorities List (NPL) on August 30, 1990. After listing on the NPL, the EPA completed a preliminary study and determined that no immediate actions were necessary at the West Lake Landfill site while site studies were underway. Subsequently, the EPA entered into a consent agreement with the responsible parties in which the parties agreed to perform field studies and engineering evaluations designed to identify the best strategies for cleanup.

Remedial investigation and feasibility study (RI/FS) work was completed in 2006, which prompted EPA to author and issue a Proposed Plan for the containment remedy at this site on June 12, 2006. Public participation activities for the remedy selection process were carried out consistent with the National Contingency Plan (NCP) section 300.430(f)(3). The Proposed Plan and the Administrative Record (AR) file—which contains the RI/FS and other supporting documents—were made available to the public in June 2006. The AR file was placed at the Bridgeton Trails Branch of the public library, which is located near the Site. The AR file was also made available at EPA's Regional Office in Kansas City, Kansas. The public notice on the Proposed Plan and public meeting was published in the Bridgeton/Hazelwood Journal of the St. Louis Post-Dispatch. This notice, a Fact Sheet, and a Press Release were created and sent accordingly to community members, elected officials (city, state, and federal), media outlets, churches, academic facilities, and special interest groups announcing the release of the Proposed Plan and the beginning of the 30-day public comment period. The Fact Sheet identified historical information on the site, including the background and EPA's preferred remedy. The preferred remedy includes installing a scientifically-engineered cover, gas control, run-off control, long-term

groundwater monitoring, and post-closure inspection and maintenance consistent with the relevant and appropriate requirements found in the Missouri Solid Waste Rules for sanitary landfills. For the radiologically-contaminated landfill areas (Areas 1 and 2), the cover will incorporate a rock/concrete rubble layer to minimize the potential for bio-intrusion and erosion, while increasing the longevity of the cover. The requirements also provide for routine inspection, maintenance, monitoring, and corrective action.

The public comment period was opened on June 14, 2006. The first public meeting was held on June 22, 2006, at the Bridgeton Community Center. At the meeting, EPA provided an overview of the Site, described the preferred alternatives for both OU-1 and OU-2, and explained the remedy selection process. Following the presentation, oral comments from the public were received and recorded for use in the Record of Decision Responsiveness Summary.

In response to a request from the city of Bridgeton, the public comment period was extended to August 14, 2006, and later extended again to October 14, 2006. Following public notice, a second public meeting was held at City Hall on September 14, 2006. All of the community concerns expressed at the first meeting were related to the proposed remedy for OU-1. Therefore, the presentation at the second meeting was more narrowly focused to address concerns with the proposed remedy for OU-1 that were identified at the first meeting. Following the presentation, oral comments from the public were received and recorded for use in the Record of Decision Responsiveness Summary.

In response to additional requests, EPA further extended the public comment period to December 29, 2006. In total, the public comment period was held open for more than six months.

Responding to ongoing community interest, EPA reopened the public comment period and held a third public meeting on March 27, 2008. Following the presentation, oral comments from the public were received and recorded for use in the Record of Decision Responsiveness Summary. This third public comment period was closed on April 9, 2008.

The Record of Decision was signed by EPA's Regional Administrator John Askew on May 29, 2008.

Written transcripts were made of all three public meetings and are contained in the AR file. Responses to comments received at the meeting and to written comments received during the comment period are provided in the Responsiveness Summary, which is Part III of the ROD.

3.3 Analysis of Key Community Issues and Concerns

EPA conducted community interviews in and around Bridgeton, Missouri prior to the year 2000. Since this Community Involvement Plan is an "Update" only, the focus of community issues and concerns will be centered around the timing of EPA's most recent actions (2006 to present). The primary issues and concerns addressed during this period have come from selected individuals and selected environmental groups who disagree with EPA's remedy selection, as defined in the May 2008 Record of Decision. The remedy selected by EPA includes:

+ The installation of a scientifically-engineered landfill cover;
+ Consolidation of radiologically-contaminated surface soil to the containment area;
+ Application of groundwater monitoring and protection standards;
+ Surface water runoff control;
+ Gas monitoring and control;
+ Institutional controls; and
+ Long-term surveillance and maintenance of the remedy.

Based on telephone conversations, e-mails, and letters from various elected officials (written on behalf of their constituents), the remedy preferred by the selected individuals and selected environmental groups includes excavating (digging) up the contaminated soil and transporting it to a certified landfill which accepts radioactive waste. There are two such landfills in the country which accept radioactive waste. This preferred remedy also requires regrading and placement of a Subtitle D cover over the landfill.

In response to a letter from the Great Rivers Environmental Law Center, the region sought additional review from EPA experts in Headquarters (Washington, D.C.). After extensive review, comment, and scoping, EPA Headquarters asked the Region to consider the following recommendations to ensure that all the remedies defined in the Proposed Plan had been thoroughly vetted. The recommendations included the following:

1) Preparation of a Supplemental Feasibility Study, which addresses all facets of the technical, legal, and financial requirements necessary to perform the remedy preferred by selected individuals and selected groups, which is excavation and transport of contaminated materials to a landfill which accepts radioactive waste; and

2) Creation of an on-site engineered disposal cell to hold radioactive waste in place. This response provides for the radioactive waste to be excavated and placed in a containment cell at the same location, therefore, no transport issues would be incurred.

In January 2010, EPA agreed to allow the potentially-responsible parties to prepare the Supplemental Feasibility Study (SFS) under an Administrative Order on Consent. This Order was the same one used for the preparation of the Redial Investigation/Feasibility and the Remedial Design. The SFS Work Plan was approved in a letter dated May 21, 2010 and released to the public in June 2010. As of September 22, 2010, the draft SFS has been approved by the Region, and is awaiting comments and concurrence by EPA Headquarters.

The creation of an on-site containment cell will not be addressed until the final SFS has been approved and released to the public.